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Standardizing Population Projections Required in Federal Fund Allocations

BY JEANNE E. GRIFFITH

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Introduction

In recent years, a growing number of Federal agencies have begun to use population projections as a factor in distributing funds. There has been, to date, no coordination of the use of these projections. As a result, projections from a variety of sources have been used. For distributing funds to the same geographic areas, various Federal agencies have used projections from different federally-generated series or, more commonly, from series produced by State or local governments. Even in the State and local governments, different series are produced by different agencies for use in applying for various Federal funding programs.

The impact of these disparities is substantial. In some instances, projections for particular areas from different sources are inconsistent. Fund allocations for different programs, by necessity reflecting these disparities, would be inconsistent. In addition, when projections have been used which are not verified for agreement with projected totals, such as for the Nation or for States, particular Federal programs have been found to be funding projected growth in sub-State areas far in excess of that projected for the Nation under any reasonable assumptions. Resulting inefficiencies may lead to the "over-funding" of billions of dollars.

The types of programs most directly affected by these policies are those which use Federal funds to construct capital facilities having a long period of expected use. These funds may be used by Federal, State, or local governments. The design of these capital facilities (such as sewers, transportation systems, water supply lines) often incorporates allowances for future growth and increased use over the expected life of the facility.

This article summarizes the development of a new policy on the development and use of a standardized series of population projections by the Federal Government. These projections are proposed for use only when agencies use population projections in decisions on the allocation of Federal funds. The proposed policies and methodologies summarized here were published in Part III of the *Federal Register* on Wednesday, December 5, 1979, in a joint set of notices by the Department of Commerce and the Office of Management and Budget.

Background

The question of using a standard series of State population projections in Federal fund allocation was initially raised in the course of an Office of Management and Budget (OMB) Planning Requirements Study ordered by President Carter. The study, a zero-based review, examined Federal planning requirements and problems in data required for Federal grant-in-aid applications. Among the issues cited in that study was the need to develop standard methodologies or standard series for population projections.

A specific example of the need for a standardized set of projections is provided by the experience of the Environmental Protection Agency (EPA), which collected State-generated population projections for use in allocating sewage treatment construction grants. These projections were generally too optimistic, as they summed to a population many tens of millions in excess of the projected United States population for 1990 even under the highest fertility model. Using the nonuniform set of projections, facilities would be built providing excess capacity in many areas and wasting billions of dollars.

Addressing this problem, the EPA under the requirements of the Clean Water Act established cost-effectiveness guidelines. These guidelines restrict the amount of Federal funding for sewage treatment facilities and relate the funding restrictions to the total population projected to be served by the facility. EPA issued regulations requiring the use of State-level population projections prepared by the Bureau of Economic Analysis as a principal basis for sizing facilities and for determining the amount of Federal funding.

Finally, an interagency Cabinet-level committee—the Interagency Coordinating Council (IACC)—was established as part of the President's Urban Policy initiative to coordinate the activities of those Departments with major programs serving urban areas. The IACC recommended the use of a standardized set of population projections for funding purposes, as a means of simplifying and improving the planning process.

As a consequence of the Planning Requirements Study and the issuance of the EPA regulations, OMB and the IACC requested that the Statistical Policy Coordination Committee (SPCC) review the issue of population projections and develop recommendations for government-wide implementation. (The SPCC is a Cabinet-level interdepartmental committee created by Executive Order No. 12013 to consider major issues of statistical policy.) The SPCC reviewed the requests in May 1978 and established a Task Force on Population Projections to study the issue on its behalf.

SPCC Recommendations

From mid-1978 through mid-1979, a number of issues were presented to the Task Force for their consideration. These issues were:

- Is the present state of population projection methodology sophisticated enough to use in Federal funding formulae?
- What are the strengths and weaknesses of currently used methodologies?
- Can the strengths of the various methodologies be combined into one general model? If so, how?
- Can usable population projections for small areas, that is, sub-State areas, be produced with one model?
- Should only one set of population projections be used by all program managers in all funding decisions?
- Is it generally appropriate to use population projections for fund allocation, in particular, in formula grant programs?
- What are appropriate methods of allocating State-level projections to sub-State entities?
- What is the best means of endorsing the continued use of alternative projection series for purposes other than allocation of funds?

Early in the deliberation process, the Task Force consulted with technical representatives from the Federal Government, the States, and the academic community. The Task Force developed an initial set of recommendations in December 1978. These were followed with a more detailed set in June 1979. Each time, the recommendations were thoroughly discussed by the SPCC and adopted with minor modifications.

The formal recommendations as adopted by the SPCC are as follows:

1. When future population has a clear effect on the level of funding in a particular federally supported program, it is acceptable that population projections be used as part of a decision process concerning the amount and distribution of Federal funds. This process should incorporate other relevant factors as well. The use of population projections in *formula grant programs*[1] should be strongly discouraged.

2. The Department of Commerce should assume the responsibility for developing, in consultation with other Federal agencies, a single set of baseline State population projections which would incorporate economic and demographic variables for use, whenever projections are included as a factor in Federal funding allocations.[2] The model, to the maximum extent feasible, should take into consideration data reflecting the needs of various Federal agencies.

3. The Department of Commerce should produce the new methodology for review and comment within six months (from December 1978).

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[1] The term *formula grant programs* is used here to denote a method of funding whereby Federal funding programs allocate their funds through the mechanical application of statistical data into a rigid formula.

[2] The term funding allocation covers either a national distribution of funds on a formula basis with future population served being a factor in the formula, or the commitment of funds for a specific project with future population served being a factor in the amount awarded.

4. The proposal developed by the Department of Commerce should provide for procedures which would permit State, regional and local input. The proposal should also clearly define the methods of review of the data by various interested parties.

5. States should develop procedures and guidelines to generate sub-State baseline population distributions consistent with the State projections. These procedures would be made available to appropriate sub-State entities for review and comment. After a comment period, they would be submitted to the Federal Government for approval. In support of this effort, the Federal Government should provide guidelines and technical assistance as appropriate.

6. A *baseline*[3] concept should be used by the States in initially distributing the Department of Commerce projected State population to sub-State entities.

7. If within a State there has been adopted a State or local population distribution policy, either explicit or implicit, or if other factors are present which would alter future population distribution, the State may develop an alternate projection series for the sub-State areas.

8. The Federal Government must approve the rationale for any alternate series before the final projections are developed by the States and submitted for use in decisions regarding Federal funding programs and projects. The State total after adjustments should be identical to the State projection prepared by the Department of Commerce.

9. It is expected that the States will provide all aspects of the development of both baseline and alternate sub-State projections for review and comment by sub-State entities.

10. When using population projections as an element of funding decisions, all Federal agencies should use the same State and sub-State projection series within a given State. The baseline sub-State series should be used unless an alternate projection series has been approved for a State. In that case, the alternate series should be used.

11. The Federal Government should periodically update its set of baseline State projections to be used in funding decisions. After the State has then generated its subsequent sub-State baseline projections, it may file an updated alternate projection series.

12. The use of a single projection series for Federal funding decisions should not be construed as prohibiting or discouraging any unit of government from using other projections for planning purposes, for analysis of Federal or local program impacts, or for various other purposes.

These recommendations have been adhered to by OFSPS, OMB, BEA, and the Bureau of the Census in developing proposals for the methodologies and procedures for creating the population projections and for developing standards for Federal agencies using them in funding decisions.

Proposed Census/BEA Methodology

In accordance with the second SPCC recommendation the Department of Commerce accepted the responsibility for developing a methodology utilizing both economic and demographic assumptions to produce a single set of State-level baseline projections. The Bureau of the Census and the Bureau of Economic Analysis (BEA) jointly developed this methodology. The methodology proposed below has been published for review and comment. It is still subject to revision, pending the comments received.

The projections produced with the proposed procedure will be baseline projections, that is, projections which reflect the essence of historical growth trends. Such projections will not attempt to take into account changes in intervention strategies by any level of government or by the private sector. Such projections will in no sense be intended as a goal, an assigned share, or a constraint on a State's economic activity or demographic growth. They should carry no connotation as to desirability or undesirability.

The results of the proposed procedure will be projections of State population levels, by sex and five-year age groups, for years that end in 0 and 5 and that occur during the 20-year period following the initial year of the projections. These results will be consistent with the most current national population projections prepared by the Bureau of the Census.

There are major technical problems in developing a projection methodology that adequately embraces the many complex interrelationships between

[3] *Baseline* projections are projections based on a defined set of economic and/or demographic assumptions and which attempt to capture and reflect the essence of historical growth patterns. They do not attempt to take into account changes in intervention strategies by any level of government or by the private sector.

demographic and economic factors. The methodology outlined below is an interim step in a continually evolving technology. As better techniques are developed, they will be incorporated into the projection methodology.

The proposed procedure consists of three major steps. First, preliminary baseline projections of the economic base in each State will be produced by BEA. These will then be used by Census in the preparation of a set of preliminary baseline State population projections. Following review of the preliminary projections, a set of final projections will be issued. These steps and the procedure for State review and comment are described in a summary fashion below.

Projections of the State Economic Base.—BEA has an ongoing program for producing baseline projections of regional economic activity, commonly referred to as the OBERS program. The methodology employed in the OBERS program will be used to prepare the projections of the economic base in each State.

As a framework for the State-level economic base projections, national projections of output, earnings and employment by detailed (two-digit SIC) industry will be developed. These national economic projections will incorporate the national population projections prepared by Census in assumptions regarding labor force participation, productivity of labor, and unemployment.

Detailed projections of earnings and employment for each State are derived through the use of a model that specifies mathematical relationships among the economic variables for each State and between the State variables and their national counterparts. The mathematical relationships are specified so as to achieve consistency between the detailed State-level projections and the national projections.

The mathematical solution of the model is followed by a detailed review of the results. The review process provides an opportunity to incorporate additional information into the projections (for example, supplemental data series and knowledge of important events not yet appearing in statistical series). This review also allows for the correction of anomalies that may result from exclusive reliance on mathematical models of economic systems.

The review is done from two perspectives. For each industry, the distribution of activity among the States is reviewed to identify anomalous shifts in industrial location patterns. For each State, the distribution of total economic activity among the industries is reviewed to identify anomalous shifts in industrial composition. Once the changes resulting from these reviews are made, national consistency is ensured via the balancing of corrections across all States. At this point, the levels of civilian employment resulting from the projections of the economic base will be transmitted to Census for use in preparing the population projections.

Projections of State Population.—Census produces several series of population projections for States using the cohort component model under a number of different assumptions. The cohort component method uses separate assumptions about future fertility, mortality, and migration and produces demographic detail by age and sex. The method used to produce this proposed baseline set of State population projections will be an expanded version of the basic model with a more elaborate treatment of the migration component.

The projections will handle separately the migration of the employed civilian population and its dependents, and the military, college, and elderly populations. The cohort component method will be used to project the total population by age, assuming no migration. After adjusting for Armed Forces and applying employment participation rates, the resulting projection of the employed civilian population will be compared to the civilian employment projected by BEA. The difference between the two projections will be assumed to be the migration of the civilian employed population. The migration of the remainder of the civilian noncollege and the youth populations will be determined on the basis of the migration of the employed population and the past trends in the age-sex specific migration rates. The migration of the military, college, and elderly populations will be based on demographic rather than economic considerations.

The fertility, mortality, and net international migration components will be based on projected State differentials applied to the assumptions used in the most current national population projections prepared by Census.

Procedures for State and Local Review and Comment on the State Projections.—In preparing these projections, BEA and the Census will maintain a close working relationship with the States. Discussions are underway concerning the establishment of a Federal/State Cooperative Program for Population Projections which could serve as the vehicle for technical exchange. The Governor of each State has been invited

to designate one State agency to participate in the program. The State agencies would review and comment on the preliminary projections. In addition, throughout the projections process—development of methodology, formulation of assumptions and generation of projected values—technical information will be provided by the Bureau of Economic Analysis and the Bureau of the Census to the State agencies for review and comment. The exchange of information between States and regional and local agencies will be encouraged.

Timing and Updating of the State Projections.—The first set of projections using these procedures will be prepared in late 1981 or early 1982, based on the population counts from the 1980 Census of Population and an update of the 1979 BEA economic projections. The production schedule, of course, depends on the availability of data and must remain tentative until comments are evaluated.

Major revision of the projections will be made when the complete demographic detail on migration flows from the 1980 Census is available and the 1984 version of the BEA OBERS projections is finalized. Major revisions twice a decade thereafter are contemplated. Between major revisions, an interim update may be produced if necessary to take account of more current population totals and economic data.

Proposed OFSPS Directive

The impact on the Federal agencies of the SPCC's recommendations will be felt from those recommendations specifying under what circumstances these projections should be used. Basically, the SPCC stated that whenever population projections are used as a factor in determining the allocation of Federal funds, the standard projection series produced by Census and BEA should be used.

The Office of Federal Statistical Policy and Standards (OFSPS) has assumed responsibility for overseeing the use of these proposed population projections by the Federal agencies. In order to implement this Federal policy, OFSPS proposes to issue a directive establishing use of standard population projections in Federal funding programs by Federal agencies. As is the case with the proposed methodology, the content of this directive is subject to change, pending review and comments.

This directive will set forth the following requirements:

1. That the population projections developed according to the procedures and methodologies established in this notice shall be used by Federal agencies when population projections are a factor in allocating Federal funds.
2. That these population projections should be used only in the context of a decision process and not in formula grant programs which allocate funds through the mechanical application of statistical data in a rigid formula, unless such formula grant programs were already in existence at the time this directive is proposed. If such established programs continue to use allocation formulae, they should incorporate the population projections developed according to this process.
3. That Federal agencies shall use sub-State population projections developed according to the guidelines issued in the OMB circular described elsewhere in this notice, when sub-State projections are considered in fund allocation.
4. That any Federal agency planning to use population projections as a factor in determining fund allocations shall first announce its proposed policy for review and comment. Such review shall involve OFSPS and OMB as well as the general public.
5. Agencies currently using population projections in funding decisions may continue using the same projection series until the standard State and sub-State projections are developed.
6. Agencies developing proposed legislation involving the use of population projections in fund allocations must ensure that the provisions of such proposed legislation are consistent with the principles outlined in the OFSPS directive or must identify and justify any departures from such principles at the time the proposed legislation is submitted to the OMB for review pursuant to OMB Circular No. A-19.

Proposed OMB Circular

The major thrust of the remaining SPCC recommendations was towards having the States work closely with sub-State areas in disaggregating the State-level projections to the sub-State areas. The intent of the SPCC was to have the entire projection process be an open one, allowing for participation of all affected levels of government as well as of citizens and organizations.

The Office of Management and Budget assumed the primary responsibility for developing a circular which would outline procedures for the distribution of the State-level projections to sub-State areas. In compliance with the SPCC Recommendations 6 and 7, the procedures would guide the States first in the development of a baseline projection series and then, if appropriate, of an alternate projection series.

Under the proposed OMB circular, States would be required to designate a single State agency to direct the process of disaggregating the State-level projections to sub-State areas. (Although it is most likely that counties will be used as the level of geography for disaggregation, some Federal programs may require smaller breakdowns. The requirement for level of geography is still being investigated by OFSPS and OMB.) The designated State agency would be responsible for coordinating with other State agencies having responsibility for, or interest in, Federal programs affected by the standardization of the population projections.

In the development of the baseline projection series for sub-State areas, States would be required to develop procedures providing for coordination with sub-State units of government in the distribution process. The States would also have to provide an opportunity for participation in the distribution process by citizens, public interest groups, and other organizations. The State procedures and methodologies for distributing the projected population would have to be available for examination by citizens, organizations and local governments.

States would be required to use the same procedures in the development of the alternate projection series, except that elected officials would be expected to play a more active role in its development. The alternate series would be developed after the State had already developed a baseline projection series. Both series must be consistent with the projected State-level projection.

Both projection series should be developed within a reasonable period—probably one year—after the State receives the State-level projection from the Department of Commerce.

States would be required to establish dispute resolution procedures in the event of disagreement either between the State and sub-State units of government or between sub-State units within the State over the proposed distribution of the projected population.

The OMB circular also addresses the involvement of sub-State governments in the distribution process. Although these governments would not be required to participate in the distribution process, if they chose to participate, they would be required to identify similar coordination procedures to those of the States, allowing for involvement of interested parties in the distribution process.

OMB proposes that the Federal Government play a review role in the development of the sub-State projection series. The Department of Commerce would review the technical methodology of each State for the baseline series, only to ensure that baseline principles are adhered to. The remaining review processes would be performed by the ten Federal Regional Councils (FRC's). The FRC's would be responsible for: (1) reviewing the States' proposed intergovernmental coordination procedures, (2) reviewing any State's rationale for developing an alternate projection series to supplant the baseline series, and (3) notifying the affected Federal agencies when a State's sub-State disaggregation process was completed and ready for use.

The OMB notice also listed a series of issues which would have to be resolved before a procedure for sub-State disaggregation could be completed. Comments and suggestions were particularly solicited in these areas. The issues were as follows:

1. *Use of Federal Regional Councils.* Some reservations have already been expressed regarding the involvement of the FRC's in the various stages of disaggregation. Suggestions as to how the Federal Government might best be involved in the State—sub-State coordination process are solicited.
2. *Federal funding of Sub-State distribution process.* Suggestions have been received that the Federal Government should help finance some of the costs incurred by the States in the disaggregation process. OMB is interested in receiving cost estimates. No decision has been made as to how or whether the Federal Government might defray some of these costs.
3. *Dispute Resolution.* Views on whether a Federal appeal or arbitration system should be established if State dispute resolution efforts were unsuccessful and the type of system that might be most suitable are requested.
4. *Direct Federal—Sub-State Coordination.* The possibility is foreseen that a State may choose not to participate in the sub-State distribution process. Under these circumstances, the Federal

Govenment might be compelled to coordinate directly with various sub-State units of government to achieve the required level of population disaggregation. Suggestions on how such Federal—sub-State coordination might be accomplished are welcomed, as are views on whether it would be appropriate for the Federal Government to allow for any adjustment to baseline projections between sub-State areas in the absence of State participation.

5. *Sanctions.* If a sub-State distribution is not completed in a timely manner, Federal agencies would have to obligate funds on some other basis. OMB proposes two alternative "sanctions" for comment. The first would have the agencies distribute funds on the basis of existing population only. The alternative sanction would impose a distribution of the projected population on the States. Future growth would be allocated on a proportional basis, calculated on the percentage of present population. Future growth for all sub-State areas would be uniform and identical to that of the State as a whole.

Conclusion

This article has reviewed the development of a proposed policy on the use of population projections by the Federal Government. The policy would require the use of a standardized series of population projections when such projections are used in allocating Federal funds. The article also reviewed a proposed methodology for producing the standardized series at the State level, a proposed OFSPS directive on the use of the projections by Federal agencies, and a proposed OMB circular for State and sub-State coordination in allocating the State-level projections to sub-State areas. A future article will review the comments received on these proposals and examine final policies and methodology.

Policy Relevance and the Integrity of Statistics

BY JAMES T. BONNER, JOSEPH W. DUNCAN,
HAROLD GOLDSTEIN, AND ROBERT L. HAGAN

Introduction

On May 30, 1979, the Methodology Section of the Washington Statistical Society held a discussion on the topic of policy relevance and the integrity of statistics. James T. Bonnen, then the Director, Statistical Systems Project of the President's Reorganization Project, chaired the discussion. The panel of speakers was as follows: Joseph W. Duncan, Director, Office of Federal Statistical Policy and Standards, U.S. Department of Commerce; Harold Goldstein, former Assistant Commissioner for Manpower and Employment Statistics, U.S. Bureau of Labor Statistics; and Robert L. Hagan, former Deputy Director, U.S. Bureau of the Census.

This article is a summary of the remarks made by the chairman and the panel members on the integrity of statistics and their relevance to policy decisionmaking. These comments reflect their personal experience with the agency with which each is associated.

Remarks of James T. Bonnen

What do we mean by policy relevance and integrity? These terms of reference are not easily defined. Policy relevance is a perceived fact, not one that can be measured in a quantifiable way. To be relevant, statistics must be meaningfully related to other data and to tested conceptual knowledge so that broader inferences needed for policy decisions can be confidently made. Statistics alone, however, are not relevant. To be relevant, statistics must be given a political and policy context and shaped for a specific decision and decisionmaker by analysis and interpretation. This transforms statistics into information and gives it meaning and relevance for a particular decision.

While it is impossible to provide a precise definition of policy relevance, one can describe some of the important attributes of statistics when considering their use in making policy decisions. Timeliness is one of the most important attributes of data that are used in making such decisions. Timeliness requires that there be a minimum amount of delay between the time data are collected and compiled and finally released.

Statistical planning for future data needs and uses is also a necessary part of having data available at the relevant moment for decisionmaking. It is also helpful if revisions can be kept to a minimum in preliminary data which are used in making important decisions. Consistency in multiple statistical series is important in reducing the uncertainty of decisions which are dependent on more than one series. An analysis of the data to place it in the context of the specific decision being made is also necessary for relevance.

The other term of reference for this discussion is the integrity of statistics. Integrity is a perceived fact in which the perception is as important as the fact of integrity. Integrity means that statistical agencies are expected to provide data, analysis, and interpretation which are accurate as possible and do not take sides on issues; that is, the statistics are objective. The professional and ethical standards of statisticians are the first and major lines of defense in the protection of the integrity of statistics. Openness in the statistical system is also another protection for the integrity of data against political pressures. Predetermined dates and times for release of statistics and publication of statistical and analytical methodologies and sources of data are a major dimension of the openness of the statistical system.

There is, however, a basic tension and an ultimate inconsistency between the pursuit of the goals of policy relevance and integrity. This conflict presents a dilemma for statisticians. On the one hand, if the statistical system is designed to have the greatest total integrity, like a library that locks up its books, the system will lack the necessary flexibility to serve effectively the information needs of policymakers. On the other hand, if the system is designed to be totally and instantly responsive to policy needs and pressures, the proper professional and institutional protection of integrity cannot be maintained.

Given this dilemma, it is necessary to design a statistical system which can attain the proper balance

between the unobtainable goals of *total* policy relevance and *total* integrity of statistics.

Remarks of Joseph W. Duncan

In these remarks I will comment on the present state of affairs, at least as I see it from the perspective of the Office of Federal Statistical Policy and Standards. The integrity of the statistical process, in my judgment, basically revolves around the individuals, the statisticians in the statistical system. We should be concerned about safeguards to make sure that political expediency does not override the professionalism and objectivity of the individual statisticians.

The standards for U.S. Federal statisticians have progressed since the early census activities when there was no civil service system. At that time, each national census was an occasion for political patronage, although the Census Bureau had control over collection activities. While it is true that the professional standards of the U.S. statistical system are as high as any national government around the world, there, nevertheless, is a continuing public uneasiness about possible politicization of the statistical system.

In 1971 those concerns were highlighted when differing interpretations were placed on the data by the statisticians at the Department of Labor and by the political commentators at the White House. At that time the White House forced the Bureau of Labor Statistics to cancel press conferences on unemployment and employment data. These actions led to considerable public concern about the politicization of Federal statistics.

Out of those events the American Statistical Association (ASA) and the Federal Statistics Users' Conference (FSUC) appointed the Committee on the Integrity of Federal Statistics to examine the facts to determine whether or not there had been adverse effects on Federal statistics. In addition, there was a congressional review and several other professional organizations, for example, the American Sociological Association, examined this issue. The feelings of all of those groups at that time was that there was really no evidence of any direct attempt to alter statistics for a particular point of view. However, there was a concern that there is an inherent risk in the present system and that every effort should be made to insulate government statisticians from political pressures.

It should be noted that it is very hard to trace politicization directly. First, many people are unwilling to talk about what goes on and, second, many of the pressures are quite subtle. One thing all of the above-mentioned reviews did agree on, however, was that public confidence in Federal statistics is of the greatest importance. As stated in the ASA-FSUC report entitled, *Maintaining the Professional Integrity of Federal Statistics*:

> Nothing could undermine the politician and implementation of his policy recommendations as much as an accumulated and intense public distrust in the statistical basis for the decisions which the policymaker must inevitably make, or in the figures by which the results of these decisions are measured. Unless definite action is taken to maintain public confidence in Federal statistics and in the system responsible for their production, there will be growing tendencies to distrust leadership.

I think it is safe to say that the concerns that were initially expressed in 1971 continue today. An editorial in the *Wall Street Journal* for February 8, 1979 ("Counting the House") commented on the President's Commission on Employment and Unemployment Statistics and on some personnel changes in the Census Bureau and pointed out the tremendous pressures which are now being placed on the statistical system. The editorial noted that the sharp rise in recent years in demands on the Federal administrator from Congress, localities, minorities, and interest groups is imposing another order of difficulty on the reporting process. It further noted, every piece of information affects someone's political agenda, and every intellectual ambiguity becomes a political contest.

The American Statistical Association has looked specifically at the Civil Service Reform Act to see what its impact would be on the professionalism of government statisticians. The president of the ASA wrote to the Office of Personnel Management setting forth some principles, namely that the persons in key statistical positions should be career reserve under the new system and subject to high professional standards for their selection. The fact that the ASA appointed that committee and that they moved promptly to act on the Civil Service Reform Act is another indication that there is some uneasiness about the risks of politicization today.

On the other hand, policy relevance is unquestionably of great importance. There are some

current mechanisms which assure that statistics from the Federal Government do focus on coordination. The ASA/FSUC report, for example, pointed out that statistical programs must be continually revised and improved to reflect new characteristics of the subject being studied and to embrace new subjects as national priorities change. These revisions must be undertaken on the basis of sound statistical principles, to assure that findings continually result in more reliable and more sensitive statistical indicators. In the spirit of that report one can cite a number of examples of outside reviews and updating of our current series that continues on a literally day-to-day basis to meet the objective of policy relevancy while at the same time assuring a sound statistical approach.

Policy relevance is also assured through new legislation authorizing statistical surveys or activities focused on important areas of concern, and through the annual examination required to set budget priorities. More importantly, policy relevance is assured by the fact that our society is pluralistic with many analytic centers to make certain that there is a continuing analysis of the raw statistics presenting various conclusions relating to individual policy issues. On balance today, the integrity of the statistical system is well accepted. There is still some unease, but overall there is very little evidence that people are charging that individual numbers are distorted from political pressure.

There are a number of procedures that exist today to insure integrity. The Office of Federal Statistical Policy and Standards, for example, monitors all of the current economic series. First of all, it makes sure that the release of data is timely. Second, there is a requirement that there be a one-hour separation between the release of the statistical information and the political interpretation and commentary.

Also of importance today is the use of advisory committees for review. Almost every time an important policy issue in statistics arises there is either a formal or informal effort to bring in advice from the statistical profession. Oversight is essential to assuring that the statistics are well received by the Federal community and particularly to obtain ideas from the outside reviewers for identifying problems.

Based on my contact with the U.S. Federal Statistical System, there is every evidence that the individual statisticians and the agencies today reflect a very high level of professionalism and objectivity. To evaluate this, one only has to consider the nature of the debates, which are always in terms of statistical problems and methodology. Political or interpretive comments do not enter into decisions. That speaks well for the system and is a subtle but very important basis on which we operate today.

Despite the fact we have a system that provides for the integrity of statistics, we must be continually vigilant and alert to taking additional steps to insure in the future that the system has the highest integrity. I think it is increasingly important because, as the *Wall Street Journal* article pointed out, the statistics of the Federal Government are currently growing in importance as individuals and everybody has their political ax to grind. There is a growing tendency to use statistics as a substitute for regulatory agreement and that presents a distortion in the system. Given, then, that there are these growing pressures, the safeguards must be kept strong.

Recently, there has been a cutting back on the use of advisory committees since they are considered to be a waste of tax dollars and are an opportunity for special interest groups to have an extra voice. It is difficult to know if that is a valid judgment applicable to all advisory committees. I do know that there is a very misdirected concern in regard to statistical advisory committees. I think that today we need more advisory committees. I would like to reestablish, for example, the statistical policy advisory committee to OFSPS which was eliminated by the Office of Management and Budget in the efforts to cut back on advisory committees. In the new area of energy statistics there is a need for sound advisory help to the Department of Energy in its statistical activities.

Second, I mentioned the ASA review of the Civil Service Reform Act. I think that Civil Service Reform needs careful watching in the months and years ahead. The system needs to be examined closely by people outside of the Government as well as by those of us inside the Government. The bonus system created by the Civil Service Reform Act is certainly very attractive, but it is also very risky. It is potentially the source of not very subtle, but in fact very direct pressure on statisticians. I think we have to monitor that to make certain that the evaluation of statisticians is based on their professional contribution, not on whether they happen to give into a particular political point of view. And the only way that can be monitored is by all of the government statisticians keeping a vigilant watch on it and by outside review.

Third, I think that the professional organizations like ASA, the Committe on National Statistics, and others, must maintain a vigorous program of watching

over statistical policy as it evolves. Audits are a very effective means of examining statistical activities by outside groups.

Fourth, career statisticians have a difficult responsibility. They should encourage public input into their decisionmaking rather than become defensive about the program data. It is easy when you are running a program to emphasize the strong points of the program while it is difficult to reveal, particularly to your colleagues, the weaknesses. It is essential that the weaknesses be exposed and debated, that the methodology be explicit, that existing deficiencies or errors in data be noted so that people are informed about the quality of the information. If these additional steps are taken, then I believe we will be even more certain that government statistics are highly objective and relevant.

Remarks of Harold Goldstein

This is a time when public policy—and therefore public attention—is focused on statistics. Statistics are used as a scorecard of how the economy is doing—whether programs are effective, whether administration goals are being met. There is, therefore, an understandable interest on the part of administrators in the Federal Government in what the statistics indicate, and a wish to find support in the numbers. This is, we can hope, usually accompanied by recognition of the importance to the policymaker himself of public confidence in the data he is using, and therefore of the integrity of the statistics.

Statistics have been important also in recent years in determining allocation among the States and local areas of Federal funds under revenue sharing, the Comprehensive Employment and Training Act (CETA), and a number of other grant or income transfer programs. Statistics are used in other ways to regulate movement of money in the economy; an example is the indexing functions of the BLS price and wage series. These new roles underline the importance of public confidence in the statistics.

In view of this, it is disturbing to see that the general public mood of cynicism toward the Government, which has increased in recent years, is affecting attitudes toward the statistics. Only recently I have been asked in another city whether the Federal Government's major economic statistics are really honest! In Washington I have heard hints to the effect that the National Commission on Employment and Unemployment Statistics, which examined the quality of these data, and the concepts and methodology, was really set up to enable the Administration to slant the statistics for its purposes. The fact that not only the statistics but also a Commission set up to review them, operating in a goldfish-bowl manner, are distrusted by some people is a measure of the depth of cynicism that exists. (Incidentally, I have attended many meetings of this Commission, and have seen its members expressing diverse points of view and adopting some recommendations that have the effect of raising the unemployment estimate and others whose effect is to lower it, so I have had trouble detecting the nature and purpose of the alleged conspiracy.)

A first line of defense against this cynicism and its potential for eroding public confidence in the statistics lies in the statistical agencies themselves and the way in which they conduct their business. It goes without saying that this requires that open and frank information about the quality of the data be given to the public. When, several years ago Julius Shiskin, as Commissioner of Labor Statistics, testified before a Congressional committee that some of the small area statistics on unemployment that his agency was required to produce by laws providing for allocation of Federal funds were no better than random numbers, he was making the kind of forthright statement that contributes to public confidence in the integrity of the statistical agencies. A part of the stance of frankness should be full documentation of the methods and active and searching research into the error structure of the data.

A second area in which agencies have to act responsibly is in the difficult situations in which the concepts being measured are not completely objective but involve value judgments. Examples include BLS family budgets, the famous "poverty line," attempts to measure economic hardships, or the demands that the Census Bureau adjust its population figures for States and local areas for the undercount in the census. It seems like an easy "cut" to let someone else make the definitional decisions and confine the statistical agency's role to merely compiling the numbers to fit the definitions. But the agency's reputation for objectivity does get tarred with the deficiencies of the figures issued; it cannot fully escape responsibility. All that can be suggested—short of complete refusal to get involved, which itself may not be a responsible stance if the data serve useful social purposes—is that the agency aggressively conduct research in the conceptual issues and seek solutions that it can live with.

A third problem area for statistical agencies with respect to public perception of their integrity is in the

interpretation of the data. The Gordon Committee in 1962 recommended that a clear distinction be made between the technical interpretaion of what the statistics are saying and a policy interpretation, and that the statistical agencies be responsible for the former. The principle here is to avoid any appearance that the agency producing the figures is obligated to defend or justify a policy stance that may be called into question by the figures: the relation of the figures to policy issues is the responsibility of policy officials. For nine years thereafter the employment and price statistics were issued with a written interpretation and a press briefing by technical officers of BLS. The Labor Department's abandonment of the press briefings in 1971 was countered by the Joint Economic Committee of Congress, which asked these officers to testify before it on the day the figures are announced, thus providing a public forum for a technical interpretation of the data. The essential principle of nonpolitical interpretation has been maintained.

The statistical agencies cannot maintain the integrity of the statistics alone under all circumstances. A political administration is subject to pressures which may tempt it, from time to time, to overstep the barriers that protect this integrity, in ways that a subordinate government agency cannot easily withstand. There is need for involvement of a strong power base independent of the government and willing to go to bat if a threat to integrity arises. Among the potential sources of such support are the professional societies, business, labor, and public-interest organizations, members of public commissions or advisory committees set up to review the statistics, or other outside groups that have an interest in good and objective statistics and a knowledge of the problems and issues. If the statistical agencies actively work with such groups and seek their advice on technical and policy issues they will be there when the crunch comes. This potential is illustrated by recent action by the American Statistical Association, referred to by Mr. Duncan, that stemmed from concern about the effects of the new personnel regulations for the top ranks of the civil service on the vulnerability of statistical agency officials to pressure from departmental heads. Such alert and forceful outside support can be invaluable in defending the integrity of the statistics. This in turn requires foresight and effective action by the Federal statistical agencies.

Remarks of Robert L. Hagan

There are some aspects of the policy relevance issue that I think are often overlooked, and they might be addressed first before getting into the integrity issue.

First, relevance often depends on who knows what data are already available. The constant turnover in Government is a problem here, as new people come in, whether top political appointments or their staff aides, they have no simple way to educate themselves on what data are produced by whom. Even people fairly sophisticated about social science knowledge utilization are not very knowledgeable on data sources. Some research a few years ago suggested that the policymaker's dependence on data is often a function of his or her trust in the assistants—policy analysts—who assist them. If the analyst is credible, the data will be accepted as credible also. This is a pretty heavy burden for the staff person, particularly if they arrived in Government only a few months ago.

I am convinced that if we had a better set of mechanisms to inform people of what data exist, the data would automatically become more relevant to the policymaker.

Second, there are false expectations about data that influence judgments about its relevance. Usually, the policymaker is faced with short deadlines, quick decisions, and perhaps a crisis atmosphere—an example might be wanting to know in a hurry what the effects of a major strike are on the national economy.

As these concerns arise, the data producer is faced with very painful trade-off choices—quick response may produce unreliable data, whereas reliable figures may take too long to generate. The policymaker may conclude that the data producer cannot meet the test of relevance.

On a related issue there always seem to be some false expectations about the five-year censuses of economic activity and agriculture. These are not geared to produce quick results overnight—their value is in the accurate and comprehensive details of activity at a designated level. Invariably, however, some policymakers are frustrated to find that the reports take many many months to produce.

The statistical agencies realize that good and reliable data take time to generate, and they want to take the time. When there is no time for quality, the quick and dirty results may be used by the policymaker instead.

From my perspective, there is a degree of tension between the *relevance* and the *integrity* of statistics. It is for the most part a healthy tension, because on the one hand, *accountability* requires that our statistical programs be *relevant*, and the integrity of data implies

the necessary *independence* from those who decide what is relevant and not relevant.

The topic implies a question: can you have more policy relevance without having less integrity? I think this is one of the basic questions addressed in the Statistical Reorganization Project, in the sense of proposing that you need more central authority over coordination of statistical work, and if you have that, you must also preserve the independence and impartiality of the work from parochial interests.

If there is a current assumption that Federal statistics are not sufficiently relevant to the policymakers, I am not sure that I would agree completely. The problem is, who decides what is relevant? In a general-purpose statistics environment such as the Bureau of the Census, you are listening to many voices about what is important, and you try to strike a balance of sorts, so that there is something in the program for everyone. The consequence may be that no constituency is fully satisfied. The planning for the 1980 census has illustrated this point quite well: what is too little for one constituency is too much for another.

When we talk about the integrity of data, we often talk in terms of *distance*—not letting our decisions and choices get too close to the policymakers. There is probably a unanimous opinion, for example, that if one or two political types in the White House made all the budget and priority decisions on what statistical work to do, the integrity of statistical work would be seriously impaired. At the other extreme, if the policymakers are left out completely, you may find too many programs meet specialized interests as voiced in the Congress or from the private sector.

Some equilibrium between relevance and integrity comes through the budget process, because the Administration proposes, and the Congress disposes, in terms of the appropriations.

I would have to say from my experience over the years, that if you let the relevance of statistics be determined at any one time by the specific priorities of an Administration's top policy officials, this would be short sighted. There is just too much turn over of both top officials as well as the issues they are concerned with, to keep tinkering with the data bases to be responsive. By the time you get the environmental pollution statistics up and running, it is energy data, and by the time you address that, it has become productivity, or something else.

These emerging issues have to be factored into the statistical work, but the data producer has to keep an eye on the long view—what data will be relevant after the first flush of great concern goes away? When the Census Bureau is planning the decennial census publications, for example, it has to think beyond the immediate interest in the population counts and consider the people who will walk into thousands of libraries year after year, looking for some basic data about their own community or their particular subject of interest. I am skeptical about the effect on integrity if you put the priority decisions about what data to produce too close to any one center of power or influence.

On the positive side, our statistical system does produce a whole series of indicators every month, and they are of high quality, and they are considered relevant for the most part. Generally, Administration officials now and in recent years, seem willing to accept the bad news along with the good, as to economic developments, and this is perhaps a sign of recognition that the integrity of the data depends on the distance and independence of the data producer. This is an area where the matter of preserving the integrity and credibility of data was institutionalized by setting a schedule of release dates which is published in advance. There are other aspects of integrity that depend I think more on the personal integrity of the top officials of statistical agencies. They are the ones subject to any subtle pressures to redirect their efforts or procedures for inappropriate reasons, political or otherwise.

To the extent that relevance and integrity have to be in tension, I'd rather be perceived as less relevant than less fully committed to the objectivity of statistical work, remembering that relevance is pretty subjective and tends to be in the eye of the beholder.

Conclusion

As was indicated by these remarks, there will be a continuing concern for the policy relevance and the integrity of statistics. The U.S. Federal Statistical System is under constant pressure to attain a proper balance between these two conflicting concepts. Professional and ethical standards as well as openness and public confidence are important to the integrity of statistics. Planning for future data needs will help produce data which are more timely for policy decisionmaking.

CURRENT DEVELOPMENTS

REVISION OF SEASONAL ADJUSTMENT METHODOLOGY

The Bureau of Labor Statistics (BLS) is making two changes in the methodology for seasonally adjusting labor force data. Both changes are consistent with the recommendations of the National Commission on Employment and Unemployment Statistics and were reviewed with the Interagency Subcommittee on Economic Statistics. The changes will affect December 1979 data, the annual revision of recent historical seasonally adjusted data, and the monthly data in 1980 and subsequent years.

First, BLS will introduce X-11 ARIMA models in place of the current practice of the use of X-11 alone. Tests have shown that use of X-11 ARIMA, which essentially places more emphasis on recent data, provides better seasonal adjustment results.

Secondly, beginning with the January release, BLS will calculate and publish in advance seasonal adjustment factors for the first 6 months of the year instead of for all 12 months. In July, a new set of seasonal factors, based on data which include the first 6 months of 1980, will be published for use during the second half of the year. Official historical revisions, however, will continue to be made only at the end of each calendar year.

The new approach will reduce the extent of revisions in the data. In particular, use of the 6-month updating cycle will improve the accuracy of the unemployment rates published for the second half of the year. (ROBERT MCINTIRE, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, telephone (202) 523-1776)

MONTHLY SERIES ON PERSONAL INCOME AND OUTLAYS

The Bureau of Economic Analysis has developed monthly estimates for personal tax and nontax payments, personal consumption expenditures in current and in constant dollars, interest dollars, interest paid by consumers to business, and personal transfer payments to foreigners. The provision of these monthly data on disposable monthly income, consumer spending and saving was recommended in the *Gross National Product Data Improvement Project Report* issued by the Office of Federal Statistical Policy and Standards.

As a result, monthly series are also available for the implicit price deflator for personal consumption expenditures, total and per capita disposable personal income in current and in constant dollars, personal saving, and the personal saving rate.

"Monthly Estimates of Personal Income, Taxes, and Outlays" appears in the November 1979 issue of the *Survey of Current Business,* and includes monthly data for 1959-79. The *Survey of Current Business* is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. The price for a single copy is $1.90. Annual subscription is $22 for second class, $35 first class. (JAMES C. BYRNES, BUREAU OF ECONOMIC ANALYSIS, DEPARTMENT OF COMMERCE telephone (202) 523-0819)

BANKING STATISTICS REVISED

Monthly series on commercial bank credit and on assets and liabilities of the United States banking system have been revised, reflecting both conceptual and statistical changes in the series. Coverage has been extended to include additional institutions engaged in banking in the United States, and lease financing receivables have been included in the bank credit series for the first time. Statistical improvements include conversion from end-of-month observations to monthly averages, estimation of data for nonreporting banks based on stratification of reported data by size of bank, and new seasonal adjustments. The revised series provide additional information on loans by type of borrower, and data for domestically chartered banks and foreign related institutions are available as separate components of the banking system. The revised bank credit series are published on a monthly statistical release (G.7), and the assests and liabilities series are published in a weekly release

(H.8). The revised data also appear in the Federal Reserve *Bulletin*, Tables 1.23 and 1.24.

In addition to the revisions in existing banking series, new measures of nondeposit funds used by banks also were introduced at the time existing series were revised. These measures reflect mainly borrowings from nonbanks based on the same institutional coverage as the revised bank credit series. These data and several related series are published in a monthly statistical release (G.10) and in Table 1.311 of the Federal Reserve *Bulletin*.

A more complete description of the revised banking data as well as of the new measures of nondeposit funds appeared in an article, "New Measure of Commercial Bank Credit and Bank Nondeposit Funds," in the September 1979 *Bulletin*. (EDWARD R. FRY, DIVISION OF RESEARCH AND STATISTICS, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, telephone (202) 452-3361)

SELECTED PUBLIC AND PRIVATE ELEMENTARY AND SECONDARY EDUCATION STATISTICS, 1976-79

A preliminary report of selected private elementary and secondary statistics for school years 1976-77 through 1978-79 has been prepared by the National Center for Education Statistics, and is available in the form of a Bulletin (NCES-80-B01). The Bulletin presents data on level, type and religious affiliation of the schools. It also covers the number of classroom teachers, non-teaching staff, pupils, high school graduates, and expenditures for current operations. For the sake of comparison, the data for private schools are juxtaposed with data for public schools.

The report shows that the number of private school pupils declined between 1976-77 school year to the 1978-79 school year by 2.0 percent, about the same as for public schools. The number of Catholic school students declined by 1.5 percent and the number of nonaffiliated school students did not change significantly.

Edited data tapes for responding schools and imputed data for the school years 1976-77 through 1978-79 are available for purchase from the Data Systems Branch, NCES, Room 3033, Washington, D.C. 20202, telephone (202) 245-8760. Single copies of the Bulletin entitled *Selected Public and Private Elementary and Secondary Education Statistics,* School Years 1976-77 through 1978-79, NCES 80-B01, may be obtained from the project officer, Joanell Porter, NCES, Room 3017, Washington, D.C. 20202, telephone (202) 245-8245. A more comprehensive statistical report with a technical appendix will be issued in the spring of 1980. (O. JEAN BRANDES, NATIONAL CENTER FOR EDUCATION STATISTICS, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, telephone (202) 472-5026)

REPORTS FROM 1974 FOLLOWUP SURVEY OF DISABLED AND NONDISABLED ADULTS

The Social Security Administration has recently released two reports analyzing data from the 1974 Followup Survey of Disabled and Nondisabled Adults. This study examines changes over a 2-year period in the disability and economic status of the working-age population and relates these changes to entitlement under the disability insurance program.

Report No. 1 "General Characteristics," examines the demographic, economic, work and health characteristics of the working-age population, as well as their knowledge of and application for government program benefits. Report No. 2, "Work Experience of the Disabled, 1972 and 1974," focuses on the work experience of the disabled as it relates to changes in disability status over time.

Requests for single copies of the survey reports or for inclusion on the regular distribution for future releases from this survey can be obtained from the Publications Staff, Office of Research and Statistics, Social Security Administration, Room 1120 Universal North Building, 1875 Connecticut Avenue, N.W., Washington, D.C. 20009. (ROBERT E. ROBINSON, SOCIAL SECURITY ADMINISTRATION, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, telephone (202) 673-5579)

HEALTH, UNITED STATES, 1979

The Department of Health, Education, and Welfare recently issued its annual health report to Congress. The report was prepared by the National Center for Health Statistics, with the assistance of the National Center for Health Services Research. Both are components of the Public Health Service.

In addition to summarizing the state of the Nation's health, *Health, United States, 1979*, examines selected issues of current concern, including health of minority groups.

The report shows that death rates are much higher for blacks and American Indians than for whites, especially in the young and middle years of life. At ages 25-44, the death rate of blacks is nearly 2½ times the white rate.

The Nation's health expenditures more than doubled in the 1970s, the report shows. The 1978 total was $192.4 billion. Growth of public financing for care has stabilized recently, accounting for nearly 41 percent of the health care bill in 1978, compared with 37 percent in 1970 and approximately 25 percent in 1960.

The report shows a big decrease in death rates in the 1970s. Decreases occurred for males and females and all age groups.

Death rates for heart disease, the leading cause of death, declined 17 percent between 1970 and 1977, nearly the same amount as between 1950 and 1970.

The U.S. infant mortality rate, which was 20.0 in 1970, dropped to 14.1 in 1977. However, the rate for black infants was still twice the rate for white infants—23.6 versus 12.3 infant deaths per 1,000 live births.

Life expectancy at birth increased 2.3 years between 1970 and 1977, from 70.9 to 73.2 years, nearly twice the gain of the 1960s. Recently, life expectancy has been increasing faster for the other population groups than for the white population.

The report shows a stabilization of the rates at which Americans see a doctor or are hospitalized, and more equal use of doctors and hospitals by race and income groups. About the same proportions—75 percent—of blacks and whites received physician care within a year in 1977. In 1972 only 67 percent of blacks had seen a doctor. Blacks and Hispanics are much more likely than whites to obtain care at an outpatient clinic.

Low income families had higher rates of physician visits in 1977 than families earning $25,000 or more. However, the volume of service for low income families may still be deficient because they have a greater need for care, the report said.

Physician supply continued to grow in the 1970s, with the number of professionally active physicians increasing by 22 percent from 1970 to 1977. The proportion of active physicians in primary care remained fairly constant over this period, at approximately 40 percent.

Because physician supply has grown faster than the population, the physician/population ratio increased in the 1970s, from 142 per 100,000 in 1950 to 179 in 1977. Geographic differences in the ratios decreased.

Copies of *Health, United States, 1979* may be obtained after April 1, 1980 by writing to the National Center for Health Statistics, 3700 East-West Highway, Hyattsville, Maryland 20782. (ALICE HAYWOOD, NATIONAL CENTER FOR HEALTH STATISTICS, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, telephone (301) 436-7019)

PSYCHIATRIC DRUG ORDERS IN THE VA

The Reports and Statistics Service, Veterans Administration, recently released the publication, *Psychiatric Drug Study Part I—Psychiatric Ward/Unit Survey and Specialized Inpatient Alcohol Dependence Treatment Unit Survey.*

This report describes the usage of psychiatric drugs in the treatment of patients in VA psychiatric wards and in specialized inpatient alcohol treatment units. Some of the topics discussed include major tranquilizers, antiparkinson drugs, antidepressants, minor tranquilizers, sedative-hypnotics, diagnoses and drug orders, major tranquilizer polypharmacy and drug holidays from major tranquilizer drugs.

Copies of the report may be obtained from Susan Gee, Biometrics Division (042A2), Reports and Statistics Service, Veterans Administration, 810 Vermont Avenue, N.W., Washington, D.C. 20420, telephone (202) 389-3368. (HOWARD J. SHARON, VETERANS ADMINISTRATION, telephone (202) 389-2423)

RECENT NATIONAL SCIENCE FOUNDATION PUBLICATIONS

A *Science Resources Studies Highlights*, "Graduate Science Enrollment in Doctorate-Granting Institutions Leveled Off in 1978" (NSF 79-321) summarizes results from the NSF fall 1978 Survey of Graduate Science Student Support at doctorate-granting institutions. The data are shown for full- and part-time students by source of support, area of science, and institutional control. Also included are the top 10 institutions ranked on the basis of total graduate science enrollment.

Academic Science: Graduate Enrollment and Support, Fall 1978 (Detailed Statistical Tables) (NSF 79-316) was published earlier.

Also released are *Detailed Statistical Tables* for *Characteristics of Experienced Scientists and Engineers, 1978* (NSF 79-322).

Copies of the *Highlights* and the *Tables* are available free from the Division of Science Resources Studies,

National Science Foundation, 1800 G Street, N.W., Washington, D.C. 20550. (CHARLES E. FALK, DIVISION OF SCIENCE RESOURCES STUDIES, NATIONAL SCIENCE FOUNDATION, (202) 634-4622)

FOUR NEW SOCIAL SECURITY BULLETIN REPORTS

The Office of Research and Statistics of the Social Security Administration recently issued the following *Social Security Bulletin* reports which are briefly described.

Educational and Economic Characteristics of Student Beneficiaries: Black-White Differences (Social Security Bulletin, September 1979).—This article studies differences during 1972-73 in economic and educational characteristics between black and white student social security beneficiaries. Findings show that blacks were disadvantaged with respect to the educational attainment of their fathers and in total family income; they had lower grade-point averages; and those in high school were older than their white counter-parts. Total educational income of blacks was greater than that of whites. Whites received more from loans and miscellaneous sources; blacks received more from grants. About half these beneficiaries said they could continue in school full time without benefits; a third said they could not.

Need Determination in AFDC Program (Social Security Bulletin, September 1979).—This study summarizes State policy with respect to the determination of need in the Federal-State program of Aid to Families with Dependent Children. The areas discussed are the individual State definitions of need, the content of need standard, the types of persons included in the payment, the amount of income and resources allowed recipient families, the method of determining need, and a comparison of State food allowances with the Department of Agriculture cost figures. The cumulative effect of these policies on payments is also explored. Information in the report is based on data assembled for the biennial report of program plan characteristics early in 1978.

Disability Benefit Applications and the Economy (Social Security Bulletin, October 1979).—This article discusses the causes of the growth in applications for disability insurance benefits, which rose from 720,000 in 1968 to a peak of 1.3 million in 1974 and—although declining slightly since then—are still reaching 1.2 million per year. Several regression models are analyzed. Among the significant economic variables found were the unemployment rate and the rate at which disability insurance replaces predisability spendable earnings. Significant demographic variables included the size of the insured population and the proportion of the insured population aged 45 and over. The introduction of the supplemental security income program in 1974 created a tremendous bulge in applications for the year.

Supplemental Security Income: Optional State Supplementation, October 1977 (Social Security Bulletin, October 1979).—In addition to the mandatory supplementation of Federal Supplemental Security Income payments required under certain circumstances, 40 States had some form of optional State supplementation covering basic needs as of October 1, 1977. This article discusses the general provisions for eligibility, assistance, and administration under optional State programs. The specific needs that call for supplementation in some States are also discussed.

Reprints of the articles are available from the Publication Staff, Office of Research and Statistics, Social Security Administration, Room 1120, Universal North Building, 1875 Connecticut Avenue, N.W., Washington, D.C. 20009, telephone (202) 673-5209. The *Social Security Bulletin* is available by subscription, at $14 a year through the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. (ROBERT E. ROBINSON, SOCIAL SECURITY ADMINISTRATION, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, telephone (202) 673-5576.)

EIA PUBLICATIONS

The Energy Information Administration (EIA) of the U.S. Department of Energy recently announced reduced subscription and single copy rates for six of its major publications. The subscription rate, for example, for the most popular EIA monthly publication, *Monthly Energy Review*, has been reduced from $50 to $33 a year. Single copy rate has been reduced from $6.25 to $2.50. Other publications similarly affected are: *The Monthly Petroleum Product Price Report; The Petroleum Market Shares: Report on Sales of Retail Gasoline; The Petroleum Market Shares: Report of Refined Petroleum Products; The Monthly Petroleum Statistics Report,* and *The Quarterly Report to Congress—Energy Information.* These publications are not only less expensive, but also now mailed first class. Previous issues were mailed third class.

The Office of Energy Information Services has recently added a new periodical, *EIA Publications—New Releases.* The bi-weekly announcement contains the latest issues and new publications to be produced

by the Energy Information Administration. It supplements the *EIA Publication Directory* (GPO Stock no. 061-000-00277-4; $2.40) which lists reports released from October 1977 through December 1978 and the EIA Publications Directory Supplement (GPO Stock no. 061-000-00348-7; $3.50) that includes EIA reports published from January 1979 through June 1979. Interested readers are encouraged to have their names added to the mailing list by writing the National Energy Information Center (NEIC), Energy Information Administration, U.S. Department of Energy, Room 850, 1726 M Street, N.W., Washington, D.C. 20461 or by calling (202) 634-5694. (THOMAS MCCARLEY, ENERGY INFORMATION ADMINISTRATION, DEPARTMENT OF ENERGY, telephone (202) 634-5685)

LIBRARY OF CONGRESS COMPLETES DRAFT OF NEW MARC FORMAT

The Library of Congress Network Development Office has completed the first draft of a new MARC format for machine-readable data files. Interested persons are invited to review this draft and provide comments or suggestions. Copies of this document will be available on request from the Network Development Office, Library of Congress, Washington, D.C. 20540 after January 2, 1980. Deadline for submitting comments is March 31.

This format is the latest in a series of formats for machine-readable bibliographic records that have been published by the Library of Congress. The format structure follows the American National Standard for Bibliographic Information Interchange on Magnetic Tape (ANSI Z39.2-1979), issued by the American National Standards Institute.

The format for machine-readable data files has been compiled with the assistance of a working group composed of Federal agency representatives and outside experts. The working group, which is chaired by Lenore Maruyama, Network Development Office, Library of Congress, will review the comments in May 1980. For further information call the Information Office, Library of Congress, telephone (202) 287-5108.

UN STATISTICAL OFFICE PUBLICATIONS RECENTLY ISSUED

The following briefly describes recent publications issued by the Statistical Office of the United Nations. Copies of these documents may be purchased from the Sales Section, United Nations, New York, New York 10017. When ordering, please use the price and stock number included in the description. Government agencies should request the discount to which they are entitled, as it is not automatically given.

World Energy Supplies, 1973-1978 (Statistical Papers, Series J, No. 22; xxviii + 324 pp.; UN Sales No. E. 79.XVII.13; $20.00).—This is the twenty-second in an annual internationally comparable series on energy, summarizing world energy trends. It updates and enlarges upon the statistical series shown in previous volumes on a consistent and internally comparable time series, which is drawn from a computer-processed data file. The study covers the principal elements of production, import, export, bunkers, stock change and apparent consumption of solid fuels, petroleum and its secondary energy and non-energy refined products, natural gas liquids, natural and manufactured gases and electricity (differentiated by thermal, hydro, geothermal and nuclear) for 193 countries and areas. The comparison between different fuels is presented in metric tons of coal equivalent as well as in metric tons of oil equivalent and in terajoules for the world, regions and countries. Separate data on end-of-year capacity figures for industrial and public electric generating plants and crude petroleum refineries, as well as production of enriched uranium, and production and trade of fuelwood and charcoal, are also shown. In addition, four tables in matrix form present international trade flows in hard coal, crude petroleum, natural gas and electricity between principal exporting and importing countries and regions. This publication is a useful reference for economic energy forecasting.

Yearbook of Industrial Statistics, 1977 edition. Vol. I, General Industrial Statistics (Statistical Papers, Series P, No. 16 (Vol. I); xi + 639 pp.; UN Sales No. E.79.-XVII.9, $30.00); *Vol. II, Commodity Production Data, 1968-1977,* Statistical Papers, Series P, No. 16 (Vol. II); viii + 750 pp.; UN Sales No. E.79.XVII.10; $30.00).—This is the eleventh in a series of annual compilations of industrial statistics. Volume I contains data for 94 countries. The following items are covered for each branch of industry: number of establishments; employment; compensation of employees; hours worked by operatives; quantity of electricity consumed; gross output; value added; gross fixed capital formation; value of stocks; and index numbers of industrial production. In addition, special tables are included on the growth of industrial production and employment in the major regions and in the world as a whole.

Volume II presents information on production in about 200 countries of selected industrial commodities

in the years 1968-1977. Quantity data for a standard list of 535 commodities were collected by questionnaire from all major developed countries and most of the developing ones. The series are shown on a commodity-by-country basis and are arranged according to the International Standard Industrial Classification (ISIC) industry groups of which the commodities are principal products. All branches of mining and manufacturing are represented.

Yearbook of Construction Statistics, 1968-1977 (Statistical Papers, Series U, No. 6; 296 pp.; UN Sales No. E.79.XVII.15; $20.00).—This is the sixth issue in a series of annual compilations of statistics on construction activity. Data are presented for 122 countries or areas. The national tables contain, in general, two different sets of data. The first are estimates from annual surveys of units engaged in construction. The second are derived from information collected by local authorities for regulatory or control purposes. The following items are covered: general indicators of activity, fixed assets, permits authorized for building and dwelling construction, and building construction and dwellings completed. In addition, international tables are included on dwelling construction and index numbers of construction activity, by countries.

PERSONNEL NOTES

DEPARTMENT OF AGRICULTURE

Economics, Statistics, and Cooperatives Service: RAYMOND M. PALLESEN, Statistician-in-Charge of the Oregon State Statistical Office, has retired and been replaced by Paul M. Williamson, formerly Assistant Statistician-in-Charge of the Texas State Statistical Office. JOHN R. PRICE, Statistician-in-Charge of the North Dakota State Statistical Office, also has retired. Mr. Price has been replaced by ROBERT F. CARVER, formerly Statistician-in-Charge of the Wyoming State Statistical Office. Replacing Mr. Carver in Wyoming is L. ODELL LARSON from the California State Statistical Office. ALVIN K. POTTER, formerly Statistician-in-Charge of the New England State Statistical Office, has accepted a 2-year assignment as leader of a Saudi/Egyptian statistical team assisting the Office of Planning and Economic Analysis, Saudi Arabian Ministry of Agriculture. CHARLES W. HAMMOND, formerly Assistant Statistician-in-Charge in the Pennsylvania State Statistical Office, has replaced Mr. Potter in New England. RICHARD J. SCHRIMPER, formerly Head, Objective Yield and Mail Survey Section, Survey Division, has been named Departmental Clearance Officer.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

National Center for Education Statistics: EVELYN R. KAY, has been designated Chief, Adult and Vocational Surveys and Studies Branch, Division of Postsecondary and Vocational Education Statistics. ROBERT CALVERT, JR., formerly Chief, Adult and Vocational Surveys and Studies Branch, Division of Postsecondary and Vocational Education Statistics, has been designated Executive Director, Advisory Council on Education Statistics. DAVID ORR, formerly Executive Director, Advisory Council on Education Statistics, has been designated Chief, Systems Design and Analysis Branch, Division of Postsecondary and Vocational Education Statistics.

National Center for Health Statistics: LAURIE DUNCAN, a temporary employee in the Epidemiology Branch, Office of Statistical Research, has been appointed to a full-time position as a Health Statistician. EDMOND GRAVES has joined the staff as a Survey Statistician in the Division of Health Manpower and Facilities Statistics. Prior to joining NCHS, Mr. Graves was Acting Branch Chief and Supervisory Statistician, District of Columbia's Department of Labor.

DEPARTMENT OF LABOR

Bureau of Labor Statistics: THOMAS J. PLEWES has been designated Deputy Assistant Commissioner, Office of Employment Structure and Trends. ROBERT J. MCINTIRE is now Chief, Data Services Group, Office of Current Employment Analysis.

FEDERAL RESERVE BOARD

Division of Research and Statistics: MARTIN REGALIA, formerly an Economist at the Federal Deposit Insurance Corporation, has joined the Board's staff as an Economist in the Capital Markets Section.

SCHEDULE OF RELEASE DATES FOR PRINCIPAL FEDERAL ECONOMIC INDICATORS

February 1980

Release dates scheduled by agencies responsible for the principal economic indicators of the Federal Government are given below. *These are target dates* that will be met in the majority of cases. *Occasionally agencies may be able to release data a day or so earlier or may be forced by unavoidable compilation problems to release a report one or more days later.*

A similar schedule will be shown here each month covering release dates for the following month. The indicators are identified by the title of the releases in which they are included; the source agency; and the release identification number where applicable. Release date information for additional series can be found in publications of the sponsoring agencies.

(Any inquiries about these series should be directed to the issuing agency.)

Date	*Subject*	*Data for*
February 1	The Employment Situation (Press release), Bureau of Labor Statistics (BLS)	January
1	Construction Expenditures (Press release), Census, C-30	December
5	Selected Interest Rates and Bond Prices, Federal Reserve Board (FRB), 415	January
6	Consumer Instalment Credit, FRB, 421	December
6	Weekly Condition Report of Large Commercial Banks and Domestic Subsidiaries, FRB, 504	Week Ending January 30
6	Merchandise Trade, Balance of Payments Basis, Bureau of Economic Analysis (BEA)	4Q'79
7	Money Stock Measures, FRB, 508	Week Ending January 30
7	Monthly Wholesale Trade (Press release), Census, BW	December
7	Factors Affecting Bank Reserves and Condition Statement of Federal Reserve Banks, FRB, 503	Week Ending February 6
8	Manufacturers' Export Sales and Orders, Census, M4-A	December
8	Sales, Inventories of Single-Family Homes, Census, C-25	December
11	Price Index of New Single-Family Homes, Census, C-27	4Q'79
11	Advance Monthly Retail Sales (Press release), Census (54)	January
11	Crop Production, Agriculture	February 1
12	Manufacturing and Trade: Inventories and Sales, Census	December
13	Weekly Condition Report of Large Commercial Banks and Domestic Subsidiaries, FRB, 504	Week Ending February 6

Date		*Subject*
February	14	Money Stock Measures, FRB, 508 ..... Week Ending February 6
	14	Factors Affecting Bank Reserves and Condition Statement of Federal Reserve Banks, FRB, 503 ..... Week Ending February 13
	15	Industrial Production, FRB, 414 ..... January
	15	Producer Price Indexes (Press release), BLS ..... January
	15	Yields on FHA Insured New Home 30-year Mortgages, HUD ..... February 1
	15	Flow of Funds Accounts, FRB, 780 ..... 4Q'79
	19	Housing Starts (Press release), Census, C-20 ..... January
	19	Capacity Utilization: Manufacturing and Materials, FRB, 402 ..... January
	19	Personal Income and Outlays, BEA ..... January
	20	Weekly Condition Report of Large Commercial Banks and Domestic Subsidiaries, FRB, 504 ..... Week Ending February 13
	20	Gross National Product (Revised), BEA ..... 4Q'79
	21	Selected Data on International Transactions of the United States, BEA ..... 4Q'79
	21	Factors Affecting Bank Reserves and Condition Statement of Federal Reserve Banks, FRB, 503 ..... Week Ending February 20
	21	Money Stock Measures, FRB, 508 ..... Week Ending February 13
	22	Advance Report on Durable Goods, Manufacturers' Shipments and Orders (Press release), Census, M3-1 ..... January
	22	Real Earnings, BLS ..... January
	22	Consumer Price Index (Press release), BLS ..... January
	25	Treasury Statement (the monthly "budget"), Treasury ..... January
	27	Weekly Condition Report of Large Commercial Banks and Domestic Subsidiaries, FRB, 504 ..... Week Ending February 20
	27	Productivity and Costs in Nonfinancial Corporate Sector, BLS ..... 4Q'79
	28	Money Stock Measures, FRB, 508 ..... Week Ending February 20
	28	Export and Import Merchandise Trade, Census, FT-900 ..... January
	28	Work Stoppages (Press release), BLS ..... January
	28	Factors Affecting Bank Reserves and Condition Statement of Federal Reserve Banks, FRB, 503 ..... Week Ending February 27
	29	Composite Indexes of Leading, Coincident, and Lagging Indicators (Press release), BEA ..... January
	29	Agricultural Prices, Agriculture ..... Mid-February
	29	Labor Turnover In Manufacturing (Press release), BLS ..... January

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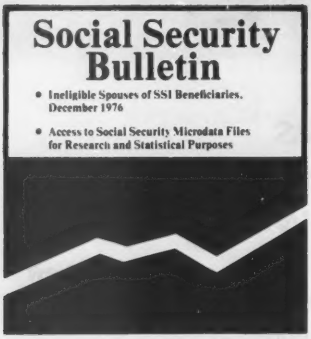
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